

Prevalence of the Impostor Phenomenon in U of T Computing Programs

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Introduction

The Impostor Phenomenon (IP) (Clance & Imes, 1978) is the feeling that one is not as capable as others believe.

IP has been well documented in multiple fields – such as medicine and in graduate populations – and may be common among high-achieving individuals.

IP feelings can be a barrier to academic achievement, as they may inhibit full participation and increase anxiety.

Methods

We deployed a survey containing the Clance Impostor Phenomenon Scale (CIPS) and demographic questions.

| | FAS | UTM | UTSC |
|------------------|------|-----|------|
| # Participants | 172 | 262 | 104 |
| % Women | 27% | 20% | 33% |
| % White or Asian | 95% | 79% | 73% |
| % First year | 0% | 50% | 0% |
| % Second year | 0% | 2% | 21% |
| % Third+ | 100% | 46% | 79% |

Table 1. Demographic details.

Results

A large percentage of our students meet the diagnostic criteria for IP.

This trend held across years of study and in both ethnically represented and under-represented groups.

Women reported more IP experiences than men.

Some students from underrepresented populations may be at particular risk.

Surprisingly (to us), some domestic students report more experiences than international students of the same ethnic background. For example, domestic East and Southeast Asian students reported scores 13 points higher than international East and Southeast Asian students.

References

1. Clance, P. R., & Imes, S. A. (1978). The impostor phenomenon in high achieving women: Dynamics and therapeutic intervention. *Psychotherapy: Theory, research & practice*, 15(3), 241.
2. Rosenstein, A., Raghu, A., & Porter, L. (2020). Identifying the prevalence of the impostor phenomenon among computer science students. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education* (pp. 30-36).

| R | FAS | UTM | UTSC |
|------------------------------|----------|----------|----------|
| All Students | 65 (64%) | 68 (67%) | 70 (69%) |
| Men | 64 (64%) | 67 (64%) | 63 (58%) |
| Women | 67 (68%) | 70 (80%) | 78 (88%) |
| White or Asian | 65 (64%) | 67 (63%) | 71 (73%) |
| Ethnically Under-represented | 63 (39%) | 71 (84%) | 70 (57%) |

Table 2. Median CIPS scores for various subpopulations. The number in brackets is the percent of the population with a score above 60, the "diagnostic criteria."

Discussion

- *Simply identifying IP is not enough.* Raising awareness *may* help students, but if members of the community do not acknowledge and seek to improve the issue, we can exacerbate it.
- We must create welcoming and supportive communities and explicitly cultivate a sense of belonging.
- Our next step is to deploy interventions to inform students of actions that contribute to IP.

IP may be particularly present in some communities. Rosenstein et al. (2020) found that IP was more prevalent in computing than other fields.

We welcome collaborators to identify areas of high IP prevalence and to find effective interventions.

Acknowledgments

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